

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Re: Appeal to the Board of Patent Appeals and Interferences

DM-10/2003

In re Application of: SCHULLER, ET AL.

Serial No.: 10/726,267

Filed: December 2, 2003

For: FRICTION RING FOR A FRICTION ROLL  
FOR THE DRIVING OF A SPOOL ON A  
TEXTILE MACHINE

Sir:



Group Art Unit: 3654

Examiner: Evan Langdon

Our Customer ID: 22827

Our Account No.: 04-1403

Attorney Ref.: S&S-1202a

1. ☐ **NOTICE OF APPEAL:** Pursuant to 37 CFR 41.31, Applicant hereby appeals to the Board of Appeals from the decision dated \_\_\_\_ of the Examiner twice/finally rejecting claims \_\_\_\_.
2. ☒ **BRIEF** on appeal in this application pursuant to 37 CFR 41.37 is transmitted herewith (1 copy)
3. ☐ An **ORAL HEARING** is respectfully requested under 37 CFR 41.47 (due within two months after Examiner's Answer).
4. ☐ Reply Brief under 37 CFR 41.41(b) is transmitted herewith (1 copy).
5. ☐ "Small entity" verified statement filed: ☐ herewith ☐ previously.
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- ☐ Fee NOT required since paid in prior appeal in which the Board of Appeals did not render a decision on the merits.

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Date: NOVEMBER 13, 2007

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(Signature of person mailing paper or fee)



ATTORNEY DOCKET NO.: S&S-1202a

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of  
SCHULLER, ET AL.

Serial No.: 10/726,267

Confirmation No.: 3358

Filed: DECEMBER 2, 2003

For: FRICTION RING FOR A FRICTION  
ROLL FOR THE DRIVING OF A SPOOL  
ON A TEXTILE MACHINE

) Examiner: Evan Langdon

) Art Unit: 3654

) Customer No.: 22827

Mailstop Appeal Brief - Patents  
Honorable Commissioner for Patents  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**BRIEF ON APPEAL**

Honorable Commissioner:

Appellants submit the following brief on appeal in accordance with 37 C.F.R. § 41.37.

1. **REAL PARTY IN INTEREST**

The real party in interest in this matter is the assignee of record, RIETER INGOLSTADT  
SPINNEREIMASCHINENBAU AG.

2. **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to the Appellants or the Appellants'  
legal representative that would directly affect or be directly affected by or have a bearing on the  
Board's decision in the pending appeal.

**3. STATUS OF CLAIMS**

Claims 23, 24, 27-29, 33-35, and 37-46 remain pending in the present application.

Claims 1-22 were cancelled and claims 23-48 were added by Applicant through a preliminary amendment. In response to a election of species/restriction requirement, claims 25, 26, 30, 31, 32, 36, 47, and 48 were withdrawn. Claims 23, 24, 27-29, 33-35, and 37-46 were examined. All the pending claims are attached hereto in the Claims Appendix.

In the Final Office Action of May 23, 2007, claims 23, 24, 27-29, 33-35, and 37-46 were finally rejected under 35 U.S.C. § 103(a).

The rejection of examined claims 23, 24, 27-29, 33-35, and 37-46 is hereby appealed.

**4. STATUS OF AMENDMENTS**

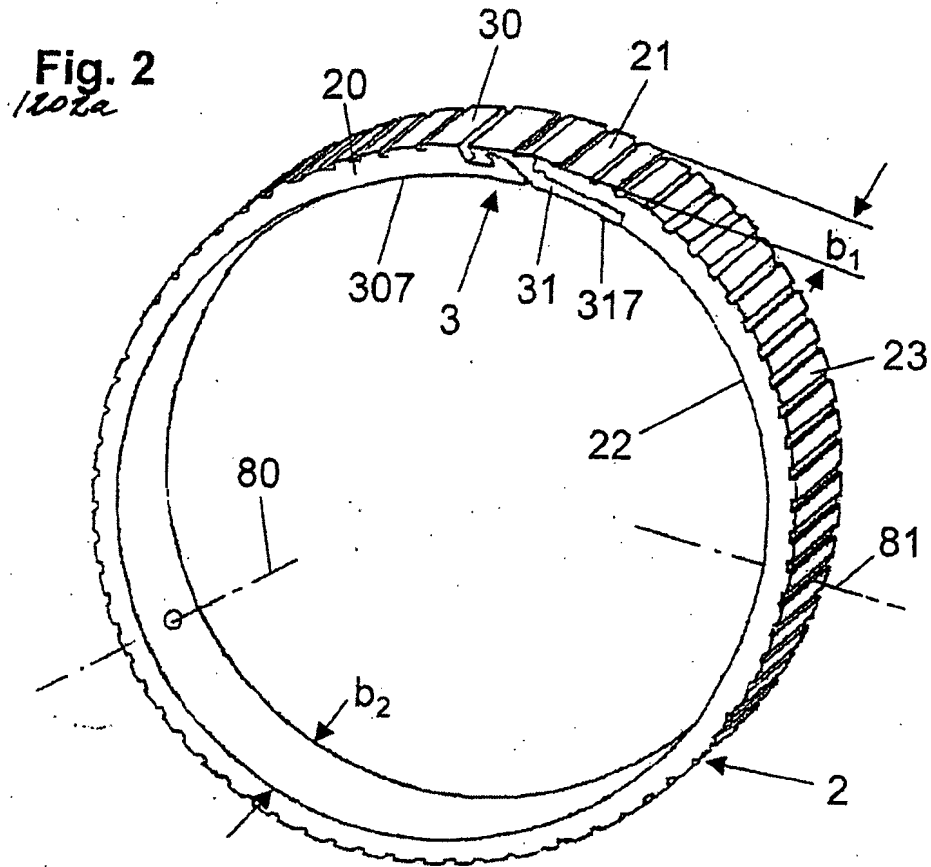
To the Appellants' knowledge, all amendments have been entered into the record.

**5. SUMMARY OF CLAIMED SUBJECT MATTER**

In general, independent claim 23 relates to an apparatus for friction driving a spool on a textile machine. See, e.g., Page 1, lines 5-6; Page 7, lines 1-5; Fig. 1.<sup>1</sup> In an exemplary embodiment, the apparatus includes a friction roll 1 that has at least one rotatable body 10, 11, or 12 disposed thereon. See, e.g., Page 7, lines 6-8; Fig. 1. A friction ring 2 is carried on the rotatable roll body (10 or 12). See, e.g., Page 6, lines 1-11; Fig. 1. The friction ring 2 is configured as a belt with two open ends bound together by a fastening apparatus 3. See, e.g., Page 6, lines 1-16; Figs. 1-3. Fig. 2 of the present application illustrates an exemplary embodiment of a friction ring 2:

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<sup>1</sup> Page numbers for the specification refer to the specification provided by the Preliminary Amendment of November 1, 2004.



Claim 27 is dependent from claim 23 and includes the additional limitation that the friction ring is further affixable to either the roll body or the friction roll by at least one auxiliary fastener. See, e.g., Page 15, lines 13-19; Fig. 1 and 2, reference numbers 80 and 81. As shown in Figs. 1 and 2 for example, fastening means 80 and 81 provide additional auxiliary fasteners for further affixing friction ring 2 to roll body 10. See, e.g., Page 15, lines 13-19; Fig. 1 and 2, reference numbers 80 and 81.

Claim 28 is further dependent from claim 27 and includes the additional limitation that the fastening apparatus and the auxiliary fastener are equally distributed over the circumference

of either at least one roll body or the friction roll. See, e.g., Page 15, lines 20-23; Fig. 1 and 2, reference numbers 3, 80, and 81. As shown in Figs. 1 and 2 for example, fastening apparatus 3 and auxiliary fasteners 80 and 81 are spaced equally over the circumference of roll bodies 10, 12.

Claim 29 is further dependent from claim 23 and includes the additional limitation that the fastening apparatus comprises two connectors that are secured to the two open ends of the friction ring. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31. As shown in Figs. 2 and 3 for example, connectors 30 and 31 are secured to the ends 20, 21 of the friction ring 2. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31.

Claim 33 is further dependent from claim 29 and includes the additional limitation that the connectors include at least one hook that is engageable with a corresponding hook on the other connector. See, e.g., Page 9, lines 16-22; Fig. 3, reference numbers 30 and 31. As shown in Figs. 2 and 3 for example, connectors 30 and 31 are each respectively hook form in design. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31.

Claim 34 is further dependent from claim 33 and includes the additional limitation that the hooks have a slanted shape. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31. As shown in Figs. 2 and 3 for example, connectors 30 and 31 are each respectively hook form in design and have a slanted shaped. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31; Page 10, lines 1-6.

Claim 35 is further dependent from claim 33 and includes the additional limitation the hooks are subjected to a load in a locking direction relative to direction of drive of said friction ring when the connectors have secured a friction ring to a roll body. See, e.g., Page 11, line 13 –

Page 12, line 2; Fig. 3, reference numbers 30 and 31. As shown in Fig. 3 for example, a drive direction f1 causes the two connectors 30 and 31 to be loaded in a locking manner.

Claim 38 is further dependent from claim 37 and includes the additional limitation that the friction ring exhibits a cross-section that diminishes from the center portion of the friction ring to its edges when no tensile force is acting on the friction ring. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23. As shown in Fig. 7 for example, in an untensioned state, friction ring 2 is constructed thicker along its axial centerline than along its edges. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23.

Claim 39 is further dependent from claim 38 and includes the additional limitation that the cross-section of the friction ring is about constant when subject to a tensile force equal to that for installation on the roll body. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23. As shown in Fig. 7 for example, the thickness of the friction ring 2 in an untensioned state can be created so that the thickness becomes constant once the friction ring 2 is tensioned by installation on e.g., the roll body 10. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23.

Claim 40 is further dependent from claim 37 and includes the additional limitation that the friction ring exhibits a width that diminishes with increasing distance from the ends of the friction ring when no tensile force is acting on the friction ring. See, e.g., Page 21, lines 17 – Page 22, line 7; Fig. 2, reference numbers 2, 6, and 7. As shown in Fig. 2, untensioned friction ring 2, 6, and 7 is provided with greater width b1 in those areas close to ends 20, 21, 60, 61, and 70, 71. See, e.g., Page 21, lines 17 – Page 22, line 7; Fig. 2, reference numbers 2, 6, and 7.

**6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

In the Final Office Action, claims 23, 24, 27-29, 33-35, and 37-46, including independent claim 23, were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,507,226 to Burke et al. in view of U.S. Pat. No. 5,833,776 to Labesky. The grounds for rejection of all claims is appealed.

**7. ARGUMENT**

**I. INDEPENDENT CLAIM 23, ALONG WITH ALL OF ITS PENDING DEPENDENT CLAIMS 24, 27-29, 33-35, AND 37-46 ARE PATENTABLE OVER BURKE ET AL. AND LABESKY.**

Appellants respectfully submit that the presently pending claims are patentable over the cited references. As discussed above, all of the pending claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,507,226 to Burke et al. in view of U.S. Pat. No. 5,833,776 to Labesky.

Unlike the apparatus for a textile machine of the present invention, neither reference relied upon in the Final Office Action relates to a textile machine nor discloses a friction roll having a friction ring. Instead, Burke et al. concerns an apparatus for a printing press or folder. Burke et al. at Col. 1, lines 11-14. More specifically, Burke et al. is directed to a gapless, seamless nip roller 12 with a nip sleeve 14 for a printing press. Burke et al. at Col. 2, lines 31-34. Burke et al.'s nip sleeve 14 is constructed from a sleeve that comprises a rigid cylindrical metal or plastic tube 46 (Burke et al. at col. 4, lines 31-54) onto which several other layers are also formed. Burke et al.'s cylindrical sleeve 14 is designed to have an interference fit with nip roller 12 and is installed as a continuous sleeve that must be slid on or off engageable nip roller 12 by

moving the sleeve in an axial direction relative to nip roller 12. Burke et al. at col. 5, lines 12-

28. Fig. 3 of Burke et al. provides a cross-sectional view of its rigid, cylindrical sleeve:

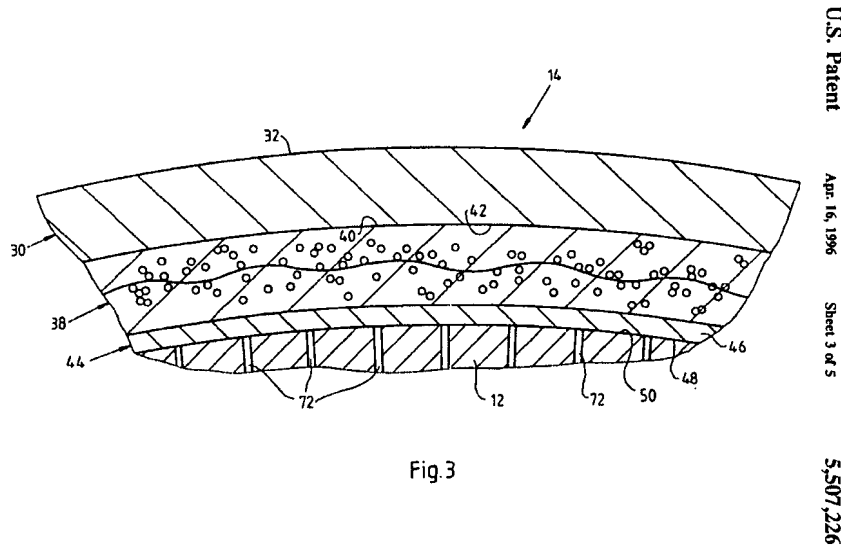


Fig.3

The Final Office Action equates Burke et al.'s rigid, cylindrical sleeve 14 with the "friction ring carried on [a] rotatable roll body, said friction ring configured as a belt . . ." as set forth in Appellant's independent claims 23. See Final Office Action at p. 2.

Labesky is directed to a Bellville Spring comprising a thin strip of hardened spring steel coiled into a circular shaped body with a frustoconical configuration – the strip having two free ends that are joined together. Labesky at Abstract. Fig. 2 is illustrative of Labesky's rigid, metal coil:



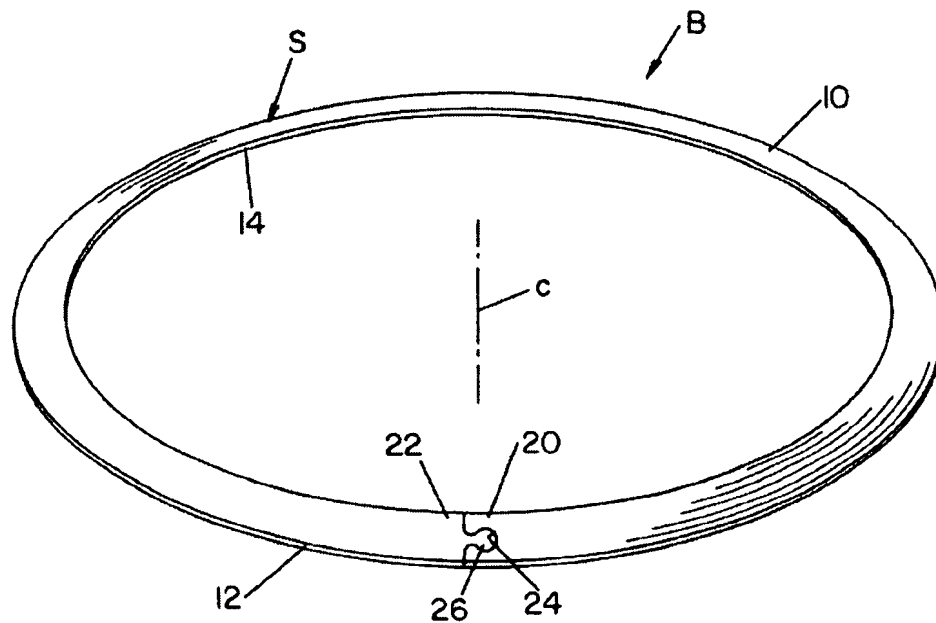


FIG. 2

Despite Burke et al.'s requirement of a gapless, seamless roller, the Final Office Action concludes that one of ordinary skill in the art would modify Burke et al.'s seamless, rigid roller with Labesky's interlocking elements 24, 26 (thereby creating a seam or gap) so to provide the "fastening apparatus" of independent claim 23. Final Office Action at 2-3.

**A. None of the references cited in the Final Office Action teach all of the limitations of independent claim 23 or its dependent claims.**

Neither Burke et al. nor Labesky, alone or in combination, teach or suggest all the limitations of independent claim 23. More specifically, neither reference discloses a “friction ring configured as a belt with two open ends bound together by a fastening apparatus” as expressly required by independent claim 23. Contrary to the final Office Action, the “nip sleeve 14” of Burke et al. is not a friction ring configured as a belt with two open ends bound together by a fastening apparatus. Instead, “nip sleeve 14” is a rigid, metal sleeve – not a belt.<sup>2</sup> More specifically, Burke et al.’s nip sleeve 14 is constructed from a sleeve that comprises a rigid cylindrical metal or plastic tube 46 (Burke et al. at col. 4, lines 31-54) onto which several other layers are also formed. Burke et al.’s cylindrical sleeve is designed to have an interference fit with nip roller 12 and is installed as a continuous sleeve that must be slid on or off engageable nip roller 12 by moving the sleeve in an axial direction relative to nip roller 12. (Burke et al. at col. 5, lines 12-28). Thus, the Burke et al. disclosure of a rigid, cylindrical sleeve is not a belt that can be flexibly wrapped around a nip roller and bound at two open ends as set forth in the present application. See, e.g., Page 2, lines 4-11; Page 8, lines 8-11; Page 17, lines 3-9; Page 21, line 17 – Page 22, line 7.

Similarly, Labesky also does not disclose a “friction ring configured as a belt with two open ends bound together by a fastening apparatus.” Instead, Labesky discloses a Bellville spring - which is a coiled, hardened spring having interlocking free ends and a frustoconical surface. (Labesky Col. 6, lines 23-51). As such, Labesky’s Bellville spring is also not a belt. For at least that reason, unlike the belt of the present invention, Labesky’s rigid, Bellville spring

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<sup>2</sup> As set forth by Applicants in the Response to Office Action, mailed on February 28, 2007, at page 6.

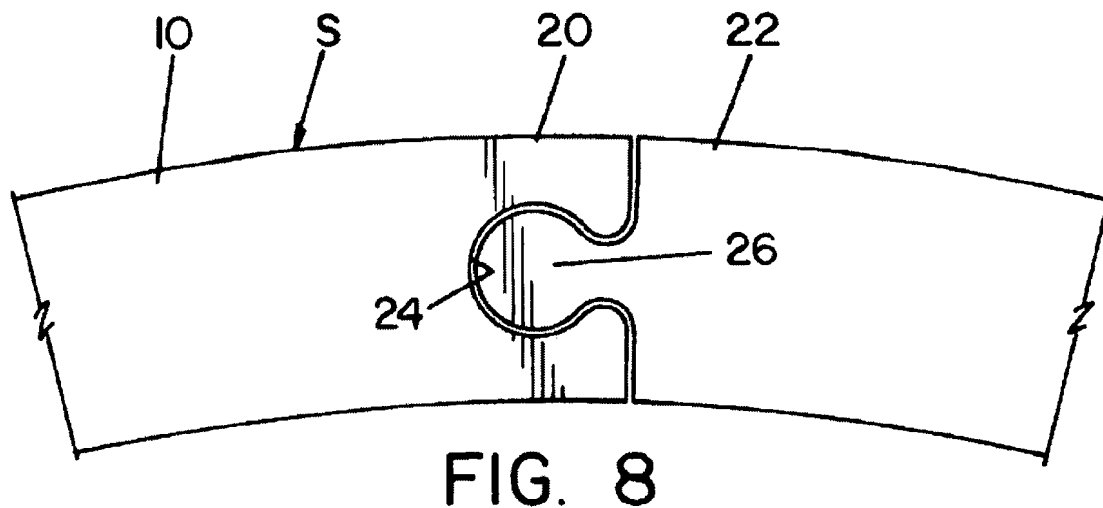
cannot be wrapped around a friction roll nor has two open ends that can be bound together without having to remove the friction roll from its supports.

In short, it is respectfully submitted that the Final Office Action fails to set forth any reference, either alone or in combination, providing a “friction ring configured as a belt with two open ends bound together by a fastening apparatus” as required by claim 23. As such, Appellants respectfully submit that the rejection of all pending claims should be withdrawn.

**B. The Final Office Action’s modification of Burke et al. with the Bellville spring of Labesky contradicts a teaching of Burke et al. and would render Burke et al. unfit for its intended purpose.**

MPEP § 2143.01 prohibits a modification of references that would render prior art either unsatisfactory for its intended purpose or that would change the principle operation of a reference. Burke et al. expressly indicates that the “nip sleeve 14 includes a cylindrical outer layer 30 upon which a smooth continuous outer side surface 32 of the sleeve is disposed, as shown in Fig. 3. . . . The smooth outer side surface 32 of the nip sleeve 14 has no gaps or seams other than one more ring shaped angular gaps 36 disposed actually along the length of the nip sleeve, as shown in Figs. 1 and 2.” (Burke et al. at col. 3, line 67 to col. 4, line 8). Having a seamless, gapless, nip roller is in fact **an objective of the invention** according to Burke et al. (Col. 2, lines 31-34).

However, modifying Burke et al. by using Labesky's fastening means whereby Labesky attaches the two open ends of a coiled, steel spring creates a seam or joint as shown, for example, in Fig. 8 of Labesky:



Clearly, however, such a seam or joint would contradict the intended purpose and principle of operation expressly set forth and required by Burke et al. of having a gapless, seamless nip roller.<sup>3</sup> Accordingly, one of ordinary skill in the art would not make the proposed combination/modification set forth in the Final Office Action, and the only explanation for such a combination comes improperly in hindsight from Appellants' present application.

In addition, modifying Burke et al. by Labesky as set forth in the Final Office Action would completely contradict the principle of operation of Burke et al. More specifically, Burke et al. specifically states that an advantage of its invention is providing a nip sleeve that is axially slid off the roller without having to completely remove the engageable nip roller. See Col. 3,

<sup>3</sup> As set forth by Applicants in the Response to Office Action, mailed on February 28, 2007, at pages 6, 8-9.

lines 1-5. As such, modifying Burke et al. to provide interconnected free ends of Labesky's Bellville spring for disconnecting and removal of the sleeve (assuming such a modification is even possible or suggested) completely changes Burke et al.'s express method of removing the sleeve by sliding it axially off the roller.<sup>4</sup> Therefore, Appellants respectfully submit that the rejection of all pending claims should be withdrawn.

**C. The Final Office Action's fails to set forth a reasonable expectation of success of a modification of Burke et al. with the Bellville spring of Labesky.**

Although required by MPEP § 706.02(j), the Final Office Action fails to set forth a reasonable expectation of success even if Burke et al. and Labesky could be combined or Burke et al. could be modified by Labesky.<sup>5</sup> Specifically, no such showing was set forth in the Final Office Action. In addition, it is respectfully submitted that the Final Office Action fails to describe how the combination of Burke et al. with Labesky would be possible, much less successful. Regardless, Labesky relates to a Bellville spring, which is a frustoconically-shaped spring. The frustoconical surface could never be used on a friction roll of a textile machine (or the printing press of Burke et al.) as recited in claim 23 because the frustoconical shape would likely destroy the textile material in other parts of the machine. The Final Office Action recites no motivation or reason for disregarding this part (the frustoconical surface) of the teaching of Labesky (MPEP § 2141.02 requires considering all teachings of a reference). In addition, even assuming that Labesky's frustoconical surface was not problematic, removal of such a Bellville spring from the friction roller of the textile machine would require moving the ends of the Bellville spring in opposite directions that are basically parallel to the axis of the spring and

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<sup>4</sup> As set forth by Applicants in the Response to Office Action, mailed on February 28, 2007, at page 6.

<sup>5</sup> As set forth by Applicants in the Response to Office Action, mailed on February 28, 2007, at pages 7-8.

friction roller. This movement is likely not even possible with a friction ring of a textile machine because of the existing ring tension, the width of the ring, and adjacent elements on the roller. Thus, not only does the Final Office Action fail to identify a reasonable expectation of success from the prior art as required by MPEP § 706.02(J), Applicants respectfully submit that such combination would likely not even work for a textile machine. Thus, Appellants respectfully submit that the rejection of all pending claims should be withdrawn.

**D. Labesky is non-analogous art that is improperly applied to Appellants' application.**

Labesky is drawn from nonanalogous art.<sup>6</sup> In order to use a reference as a basis for rejection of the Applicant's invention, the reference must either be in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP § 2141.01(a). No proper basis is provided in the Office Action for how Labesky's Bellville-type spring relates to a problem that was being solved by Applicants. This is particularly problematic given that a frustoconical spring would not work on the friction roller of a textile machine and that Labesky's ends could not be separated for removal from a textile machine due to the presence of adjacent elements. Thus, Applicants' respectfully submit that the use of such reference as a basis of rejection was improper.

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<sup>6</sup> As set forth by Applicants in the Response to Office Action, mailed on February 28, 2007, at page 8.

**II. DEPENDENT CLAIM 27 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 27 is dependent from claim 23 and includes the additional limitation that the friction ring is further affixable to either the roll body or the friction roll by at least one auxiliary fastener. See, e.g., Page 15, lines 13-19; Fig. 1 and 2, reference numbers 80 and 81. As shown in Figs. 1 and 2 for example, fastening means 80 and 81 provide additional auxiliary fasteners for further affixing friction ring 2 to roll body 10. See, e.g., Page 15, lines 13-19; Fig. 1 and 2, reference numbers 80 and 81. Contrary to the Final Office Action at page 3, no such limitation is indicated in Burke at Col. 4, lines 49-61 or elsewhere in the references cited.

**III. DEPENDENT CLAIM 28 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 28 is further dependent from claim 27 and includes the additional limitation that the fastening apparatus and the auxiliary fastener are equally distributed over the circumference of either at least one roll body or the friction roll. See, e.g., Page 15, lines 20-23; Fig. 1 and 2, reference numbers 3, 80, and 81. As shown in Figs. 1 and 2 for example, fastening apparatus 3 and auxiliary fasteners 80 and 81 are spaced equally over the circumference of roll bodies 10, 12. Contrary to the Final Office Action at page 3, no such limitation is indicated in Burke at Col. 4, lines 49-61 or elsewhere in the references cited.

**IV. DEPENDENT CLAIM 29 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 29 is further dependent from claim 23 and includes the additional limitation that the fastening apparatus comprises two connectors that are secured to the two open ends of the friction ring. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31. As shown in Figs. 2 and 3 for example, connectors 30 and 31 are secured to the ends 20, 21 of the friction ring.

2. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31. Contrary to the Final Office Action at page 3, no connectors are secured to the ends of Labesky's Bellville spring. Instead, Labesky's connectors 24, 26 are an integral part of the spring and are not secured thereto. Labesky's at Col. 1, lines 23-34; Col. 7, lines 1-11.

**V. DEPENDENT CLAIM 33 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 33 is further dependent from claim 29 and includes the additional limitation that the connectors include at least one hook that is engageable with a corresponding hook on the other connector. See, e.g., Page 9, lines 16-22; Fig. 3, reference numbers 30 and 31. As shown in Figs. 2 and 3 for example, connectors 30 and 31 are each respectively hook form in design.

See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31. Contrary to the Final Office Action at page 3, no hooks are shown or indicated in Labesky at Figs. 1 and 2.



**VI. DEPENDENT CLAIM 34 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 34 is further dependent from claim 33 and includes the additional limitation that the hooks have a slanted shape. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31. As shown in Figs. 2 and 3 for example, connectors 30 and 31 are each respectively hook form in design and have a slanted shaped. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31; Page 10, lines 1-6. Contrary to the Final Office Action at page 3, no hooks having a slanted shaped are shown or indicated in Labesky at Fig. 16 or elsewhere in the cited references.

**VII. DEPENDENT CLAIM 35 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 35 is further dependent from claim 33 and includes the additional limitation the hooks are subjected to a load in a locking direction relative to direction of drive of said friction ring when the connectors have secured a friction ring to a roll body. See, e.g., Page 11, line 13 – Page 12, line 2; Fig. 3, reference numbers 30 and 31. As shown in Fig. 3 for example, a drive direction f1 causes the two connectors 30 and 31 are loaded in a locking manner. d. See, e.g., Page 9, lines 6-15; Fig. 3, reference numbers 30 and 31; Page 10, lines 1-6. Contrary to the Final Office Action at page 3, no hooks subjected to a load in a locking direction relative to direction of drive are shown or indicated in Labesky at Fig. 16 or elsewhere in the cited references.

**VIII. DEPENDENT CLAIM 38 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 38 is further dependent from claim 37 and includes the additional limitation that the friction ring exhibits a cross-section that diminishes from the center portion of the friction ring to its edges when no tensile force is acting on the friction ring. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23. As shown in Fig. 7 for example, in an untensioned state, friction ring 2 is constructed thicker along its axial centerline than along its edges. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23.

The Final Office Action states that such a property is “inherent to an elastic material that is ring-shaped and subjected to a tensile force.” No citation to a prior art reference is provided.

Appellant’s respectfully submit that this basis for rejection contradicts common knowledge. For example, a rubber band does not inherently have a cross section that diminishes from the center to its edge when NO tensile force is acting on it as recited in claim 37. Yet, a rubber band is an elastic material so such property cannot be inherent – contrary to that found in the Final Office Action for any elastic material.

**IX. DEPENDENT CLAIM 39 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 39 is further dependent from claim 38 and includes the additional limitation that the cross-section of the friction ring is about constant when subject to a tensile force equal to that

for installation on the roll body. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23. As shown in Fig. 7 for example, the thickness of the friction ring 2 in an untensioned state can be created so that the thickness becomes constant once the friction ring 2 is tensioned by installation on e.g., the roll body 10. See, e.g., Page 21, lines 1-16; Fig. 7, reference numbers 2 and 23.

The Final Office Action states that such a property is “inherent to an elastic material that is ring-shaped and subjected to a tensile force.” No citation to a prior art reference is provided.

Appellant’s respectfully submit that this basis for rejection contradicts common knowledge. For example, an elastic material does not inherently have a cross section that is about constant when subjected to a tensile force. Instead, such cross section can vary depending upon the physical dimensions of the elastic material in its unstretched condition.

**X. DEPENDENT CLAIM 40 IS PATENTABLE BECAUSE NONE OF ITS LIMITATIONS ARE PRESENT OR OTHERWISE TAUGHT IN THE REFERENCES CITED IN THE FINAL OFFICE ACTION.**

Claim 40 is further dependent from claim 37 and includes the additional limitation that the friction ring exhibits a width that diminishes with increasing distance from the ends of the friction ring when no tensile force is acting on the friction ring. See, e.g., Page 21, lines 17 – Page 22, line 7; Fig. 2, reference numbers 2, 6, and 7. As shown in Fig. 2, untensioned friction ring 2, 6, and 7 is provided with greater width b1 in those areas close to ends 20, 21, 60, 61, and 70, 71. See, e.g., Page 21, lines 17 – Page 22, line 7; Fig. 2, reference numbers 2, 6, and 7.

The Final Office Action states that such a property is “inherent to an elastic material that is ring-shaped and subjected to a tensile force.” No citation to a prior art reference is provided.

Appellant’s respectfully submit that this basis for rejection contradicts common knowledge. For example, a broken rubber band does not necessarily exhibit a width that diminishes with increasing distance from its ends when NO tensile force is acting upon it. Yet, a rubber band is an elastic material so, therefore, such limitation cannot be inherent to every elastic material as set forth in the Final Office Action.

## CONCLUSION

In conclusion, Appellants requests favorable action and allowance of the presently pending claims.

Respectfully requested,

DORITY & MANNING, P.A.

A handwritten signature in black ink, appearing to read 'Tim E. Williams', written over a horizontal line.

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## 8. CLAIMS APPENDIX

Claims 1 through 22: (Cancelled)

23. (Previously Presented) An apparatus for friction driving a spool on a textile machine, said apparatus comprising:

a friction roll having at least one rotatable roll body disposed thereon; and

a friction ring carried on said rotatable roll body, said friction ring configured as a belt with two open ends bound together by a fastening apparatus.

24. (Previously Presented) An apparatus as in claim 23, wherein said fastening apparatus also affixes said friction ring to said roll body to secure the friction ring to said roll body.

25. (Withdrawn) An apparatus as in claim 24, wherein said fastening apparatus comprises a bolt.

26. (Withdrawn) An apparatus as in claim 24, wherein said fastening apparatus comprises at least one protuberance that is insertable into a complementary back cut groove defined in at least one of said roll body or said friction roll parallel to the axis of said friction roll.

27. (Previously Presented) An apparatus as in claim 23, wherein said friction ring is further affixable to at least one of said roll body or said friction roll by at least one auxiliary fastener.

28. (Previously Presented) An apparatus as in claim 27, wherein said fastening apparatus and said auxiliary fastener are equally distributed over the circumference of at least one said roll body or said friction roll.

29. (Previously Presented) An apparatus as in claim 23, wherein said fastening apparatus comprises two connectors, whereby one of said connectors is secured to each of said two open ends of said friction ring.

30. (Withdrawn) An apparatus as in claim 29, wherein said fastening apparatus further comprises a bolt device that is extendable through recesses in both of said connectors.

31. (Withdrawn) An apparatus as in claim 30, wherein said bolt device is extendable into at least one of said roll body or said friction roll.

32. (Withdrawn) An apparatus as in claim 29, wherein said connectors comprise clips.

33. (Previously Presented) An apparatus as in claim 29, wherein each of said connectors include at least one hook that is engagable with a corresponding hook on said other connector.

34. (Previously Presented) An apparatus as in claim 33, wherein said hooks have a slanted shape.

35. (Previously Presented) An apparatus as in claim 33, wherein said hooks are subjected to a load in a locking direction relative to a direction of drive of said friction ring when said connectors have secured a friction ring to said roll body.

36. (Withdrawn) An apparatus as in claim 29, wherein surfaces of said friction ring and said connectors form a shape-based connection to secure said friction ring to said roll body.

37. (Previously Presented) An apparatus as in claim 23, wherein said friction ring is elastically constructed in a length direction so that said friction ring when installed on said roll body is subjected to tensile force.

38. (Previously Presented) An apparatus as in claim 37, wherein said friction ring exhibits a cross-section that diminishes from a center portion of said friction ring to edges of said friction ring when no tensile force is acting on said friction ring.

39. (Previously Presented) An apparatus as in claim 38, wherein said cross-section of said friction ring is about constant when subject to said tensile force equal to that of installation on said roll body.

40. (Previously Presented) An apparatus as in claim 37, wherein said friction ring exhibits a width that diminishes with increasing distance from said ends of said friction ring when no tensile force is acting on said friction ring.

41. (Previously Presented) An apparatus as in claim 23, wherein said friction ring is preshaped in a curvature that conforms to a curvature of a circumference of said roll body.

42. (Previously Presented) An apparatus as in claim 41, wherein said fastening apparatus is preshaped in a curvature that conforms to a curvature of a circumference of said roll body.

43. (Previously Presented) An apparatus as in claim 23, wherein said ends of said friction ring are joined by an adhesive.

44. (Previously Presented) An apparatus as in claim 43, wherein said ends of said friction ring have prepared points for adhesion.

45. (Previously Presented) An apparatus as in claim 44, wherein said prepared points of adhesion are covered with adhesive before installation of said friction ring on said roll body.

46. (Previously Presented) An apparatus as in claim 43, wherein said adhesive is capable of being activated by at least one of light or heat.

47. (Withdrawn) An apparatus as in claim 23, wherein said fastening apparatus further comprises a bolt device that is extendable through recesses in both of said ends of said friction ring.

48. (Withdrawn) An apparatus as in claim 47, wherein said bolt device is extendable into at least one of said roll body.



9. **EVIDENCE APPENDIX**

None

10. **RELATED PROCEEDINGS APPENDIX**

None